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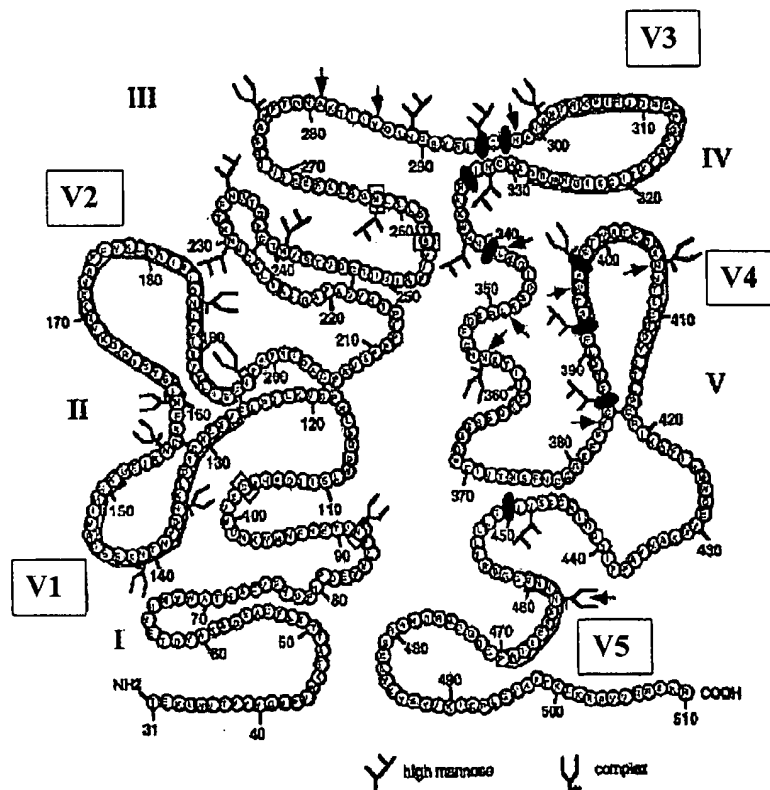
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(54) Title: CARBOHYDRATE-BASED SYNTHETIC VACCINES FOR HIV



(57) Abstract: The present invention relates to a constructed oligosaccharide cluster, optionally bonded to an immunogenic protein, that can be administered to a subject to induce an immune response for increasing production of 2G12 and/or used in assays as reactive sites for determining compounds that inactivate and/or bind the high-mannose oligosaccharide cluster. Compositions comprising these clusters, methods of using these clusters and compositions are disclosed.